

ARCHER, CATHRO

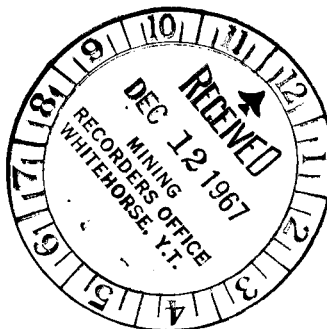
AND ASSOCIATES LTD.

CONSULTING GEOLOGICAL ENGINEERS

800 BLDG, WHITEHORSE, Y.T. 667-4113

BENTALL CENTRE, VANCOUVER, B.C. 688-3022 OR 522-1562

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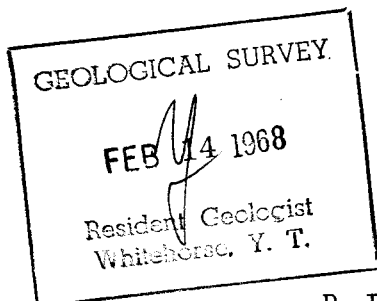


RABBIT CREEK

COPPER PROPERTY

KLUANE DISTRICT, YUKON

PACIFIC GIANT STEEL ORES LTD.



2040.30

R.J. Cathro, P. Eng.

December 1, 1967

This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:

D. Whidley
RESIDENT GEOLOGIST

Approved as to cost in the amount
of: \$ 2040.30

H. E. Redden
RESIDENT MINING ENGINEER

Accepted as representation work
under Section 53(4), Yukon Quartz
Mining Act.

[Signature]
COMMISSIONER OF YUKON

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MAPS

Figure 1- Location Plan

Figure 2- Sketch Plan- Rabbit Creek .

SUMMARY

The Rabbit Creek property is situated in the White River district, southwest Yukon, adjoining the property of Silver City Mines Ltd. A widespread mineralized zone on Rabbit Creek consists of chalcopyrite and pyrite in a quartz-healed fracture zone. Although the geological features are obscured by a surface zone of leaching and iron staining, the occurrence has many features of a porphyry deposit. Trenching has shown that sulfides are present beneath the gossan zone and that the amount increases with depth. An I.P. survey and geological mapping program, estimated to cost \$25,000.00 are recommended.

INTRODUCTION

Pacific Giant Steel Ores Ltd. is the optionee of a 104 claim property in the White River district, southwest Yukon, referred to in this report as the Rabbit Creek property. The property adjoins the northwest end of the Silver City property on which a significant copper discovery has recently been made. The writer visited the Rabbit Creek property on September 21 and 29 and October 16 and is thoroughly familiar with the surrounding district, having directed all exploration to date for Silver City Mines Ltd. The only previous reports on the property are by A.R. Parker, P. Eng., August 30, 1967, and by D.D. Cairnes, G.S.C. Memoir 50, Upper White River District, Yukon, 1915, pp 123-4.

LOCATION & ACCESS

The property lies in N.T.S. mapsheet 115 F-15, at $61^{\circ} 51' N$ and $140^{\circ} 51' W$, within 3 miles of the Alaska Boundary (see Figure 1). The main showing on Rabbit Creek is 5 miles northwest of the discovery zone of Silver City Mines Ltd. on White River. It is 15 air miles from the nearest road point, Mile 1168 (White River Lodge) on the Alaska Highway. Mile 1168 is 250 miles from Whitehorse and 300 miles from the seaport of Haines, Alaska by all-weather road.

Present access is by helicopter or on foot from the nearest aircraft lake, Tchawsahmon, 5 miles north. The nearest aircraft charter base is Whitehorse, 225 miles southeast.

PROPERTY

The property consists of 104 contiguous unpatented mineral claims. It adjoins the southwest end of the Silver City Mines Ltd. property and forms a long, narrow block aligned along a northwest trending mountain front. Two Crown Granted claims, Silver Fox, and Black Fox, which date from before World War I, are located on Rabbit Creek adjoining the west side of the property. The claims are registered in Whitehorse, Yukon as Follows:

<u>Claim Name</u>	<u>Grant No.</u>	<u>Owner</u>	<u>Expiry Date</u>
cc 1-72	Y11538-Y11609	H. Rail	Dec. 16, 1967
cc 73-104	Y20843-Y20874	H. Rail	Sept. 1, 1968

HISTORY

Copper was first discovered in the Upper Canyon of White River in 1905. The surrounding district was well prospected for copper and gold and a number of claims were staked. Several adits were driven on the east bank of White river but the property was soon abandoned. It was subsequently restaked several times but the first serious exploration was not carried out until 1967 when Silver City Mines Ltd. uncovered a chalcocite and native copper zone by bulldozing. The discovery zone assayed 3.53% copper and 0.2 ozs/ton silver and contains no other gangue sulfide minerals.

When Cairnes visited Rabbit Creek in 1913, short adits had been driven on the Silver Fox claim above the waterfall and at a second point below the waterfall (see Figure 2). There is no record of later work except that at the lower location, a short adit is present on the north side of the creek in addition to that mentioned by Cairnes.

Small amounts of malachite, chalcopyrite and pyrite are present on these adit dumps and in two short adits which can still be entered. Cairnes sampled the face of the Silver Fox adit and obtained an assay of 0.85% copper over 3.5 feet.

GEOLOGYRegional

The HH group covers a narrow strip of Paleozoic volcanics and sediments (Cache Creek group) which are overlain on the southwest by flat-lying Tertiary flows and sediments, and bounded on the east by the Generc-Tchawsahmon Thrust Fault (see Figure 1). Northeast of the fault scarp, which forms a prominent mountain front, the Tchawsahmon valley forms a flat, drift-filled valley over five miles wide. At the southeast end of the property the fault apparently splits and Mush Lake group volcanics of Mesozoic age occur with Cache Creek rocks.

The Cache Creek volcanics are typical greenstones and are characterized by massive texture, blocky jointing, and moderate shearing and alteration. They are usually various shades of green. The Mush Lake volcanics on the other hand are characteristically amygdaloidal and sometimes porphyritic. Colour ranges from black to brown to red to green. The Tertiary volcanics are true plateau basalts which form thick, flat deposits overlying the older rocks and forming all the high mountains in the area.

Economic

All the copper mineralization in this district is associated with volcanic rocks and is of two types. On the Silver City property, chalcocite with lesser amounts of native copper and bornite occur in Mush Lake rocks. No other gangue sulfides have been recognized and the discovery zone has a width of 30 feet. Malachite is the only alteration product.

On the HH claims, copper mineralization occurs over a wide area on Rabbit Creek and has been reported but not confirmed elsewhere. This consists of pyrite and chalcopyrite with traces of bornite associated with quartz veins. The mineralization is found within the Cache Creek group and is unfortunately masked by very strong leaching and gossan staining. This stain is caused by the chemical weathering of the pyrite and is in sharp contrast to the light malachite stain which is associated with the chalcocite mineralization.

This gossan staining consists of a rusty sheen on weathered surfaces with rare traces of faint malachite. It is so pervasive in the upper foot of bedrock, perhaps emphasized by local strong jointing and shearing, that no features of the rocks or sulfide minerals can be seen. Drilling and blasting of trenches to depths of two feet

has shown that this leaching disappears about one foot below surface and gives way to disseminated grains and patches of pyrite and chalcopyrite associated with quartz veins. These veins are up to six inches in width, appear to dip steeply, and strike randomly.

A character sample of chalcopyrite-rich material assayed 4.51% copper, 0.24 ozs/ton silver and trace gold. The largest trench, beside the adit on the north side of Rabbit Creek (see Figure 2) assayed 1.02% copper for a length of 31 feet and a width of 3 feet. Twelve other chip samples from smaller pits and trenches assayed between 0.75% and 0.13%. In each case the outcrop surface was barren except for the rusty stain. Sulfides are almost always present and the amount increases with depth.

A small orientation soil sample survey was conducted by the writer, consisting of a line of samples along each side of Rabbit Creek, several hundred feet above the creek. Soil conditions were found to be poor. Overburden consists mainly of coarse talus between outcrop areas with only occasional areas of soil. The sampling served mainly to show that copper is widespread between the outcrop areas. Values up to 2000 ppm were obtained with a background level of slightly over 100 ppm.

CONCLUSIONS & RECOMMENDATIONS

Significant amounts of copper mineralization have been proven by blasting trenches. This is widespread in two outcrop areas 1500 feet apart. The leaching & iron staining make surface sampling impossible and prospecting is confined to outlining stain areas. The outcrops are hard and resistant and the banks of Rabbit Creek too steep for effective bulldozer trenching.

Although the conclusion is based on only limited evidence, the mineralization has several of the basic features of a porphyry-type deposit. These are the association of sulfides with a quartz-healed fracture pattern, the widespread extent of the mineralization, the abundance of pyrite and the relatively low copper grade.

The possibility of finding a large tonnage porphyry deposit in an open-pit situation, relatively close to an established transportation route, justifies further exploration. The recommended approach is an induced polarization (I.P.) survey to outline the limits and pattern of the mineralization and indicate targets for drill sampling. A small geological mapping program is also needed. In addition to some detail around Rabbit Creek, reconnaissance mapping and prospecting for other zones should be conducted along strike. The estimated cost is:

I.P. Survey

20 line miles @ \$500.00-----	\$10,000.00
camp costs-----	1,500.00
linecutting-20 lm @ \$75.00-----	1,500.00
transportation-----	3,500.00
mobilization-----	<u>1,000.00</u>
	\$17,500.00

Mapping & Prospecting

Geologist, 2 helpers- 3 weeks.

wages, camp costs, transportation,

and supervision----- 5,000.00

Contingencies----- 2,500.00

Total-----\$25,000.00

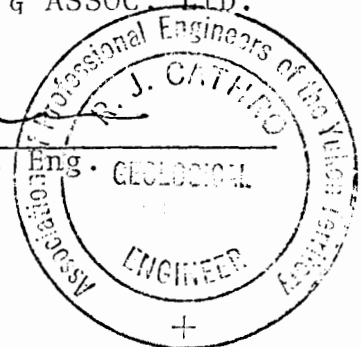
Follow-up is naturally contingent on results of the initial exploration. Diamond drilling is the next logical step.

Respectfully submitted,

ARCHER, CATHRO & ASSOC. LTD.



R.J. Cathro, P. Eng. GEOLOGICAL



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CONSULTING GEOLOGICAL ENGINEERS

SPAIN BUILDING, WHITEHORSE, Y.T. 667-4113

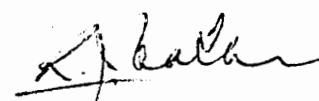
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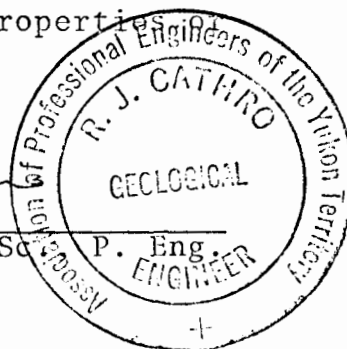
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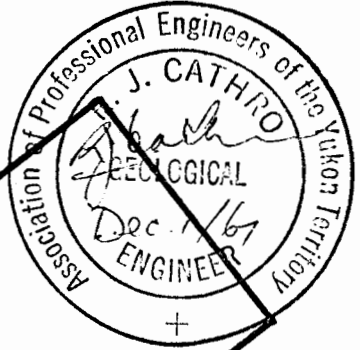
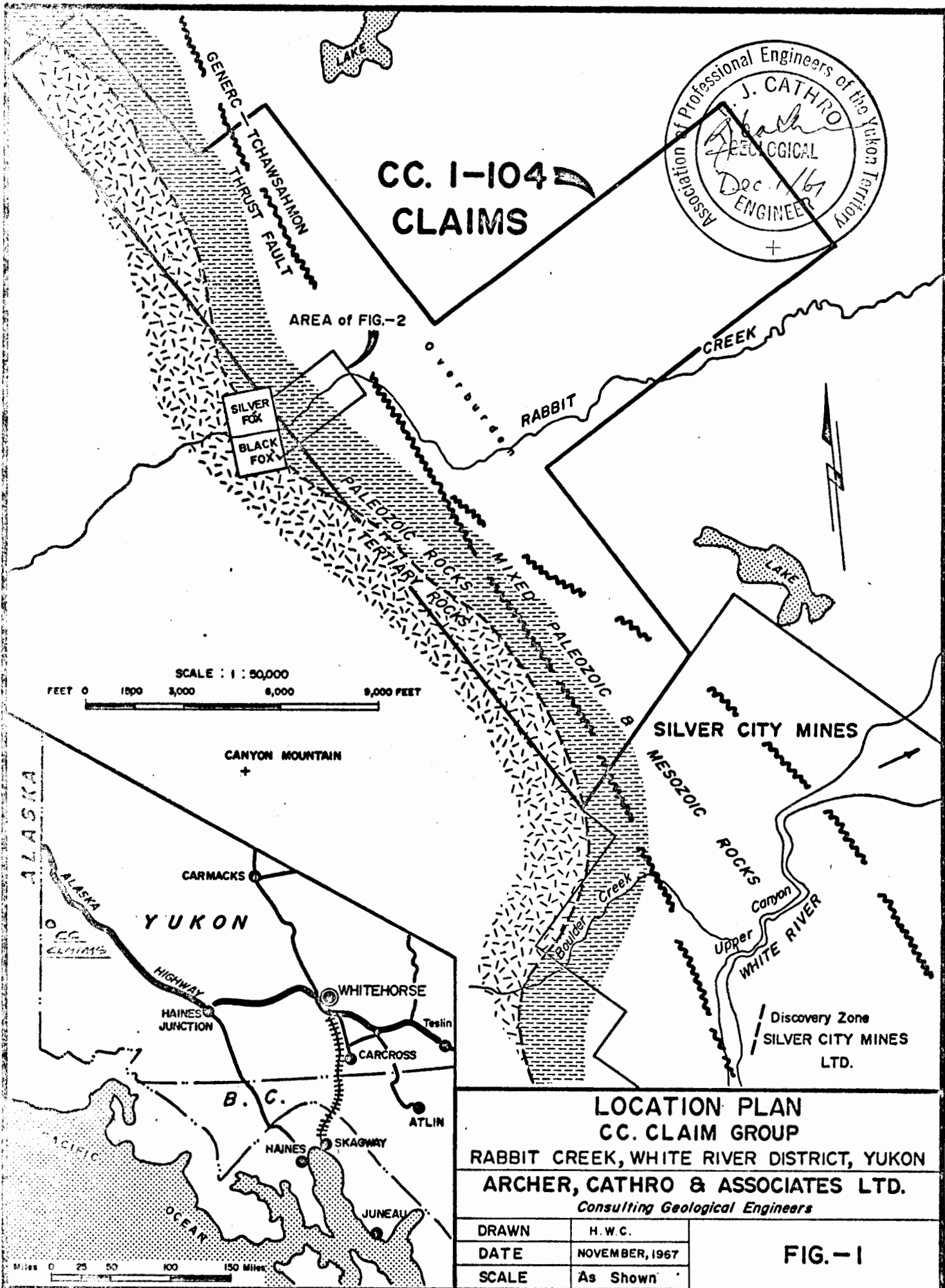
December 1, 1967.

I, Robert J. Cathro, with business and residential address in Whitehorse, Yukon, do hereby declare that:

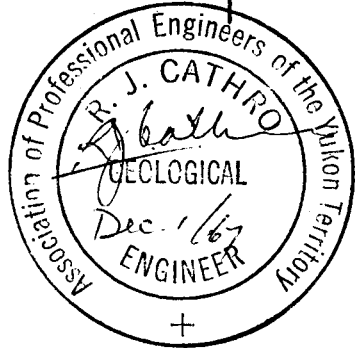
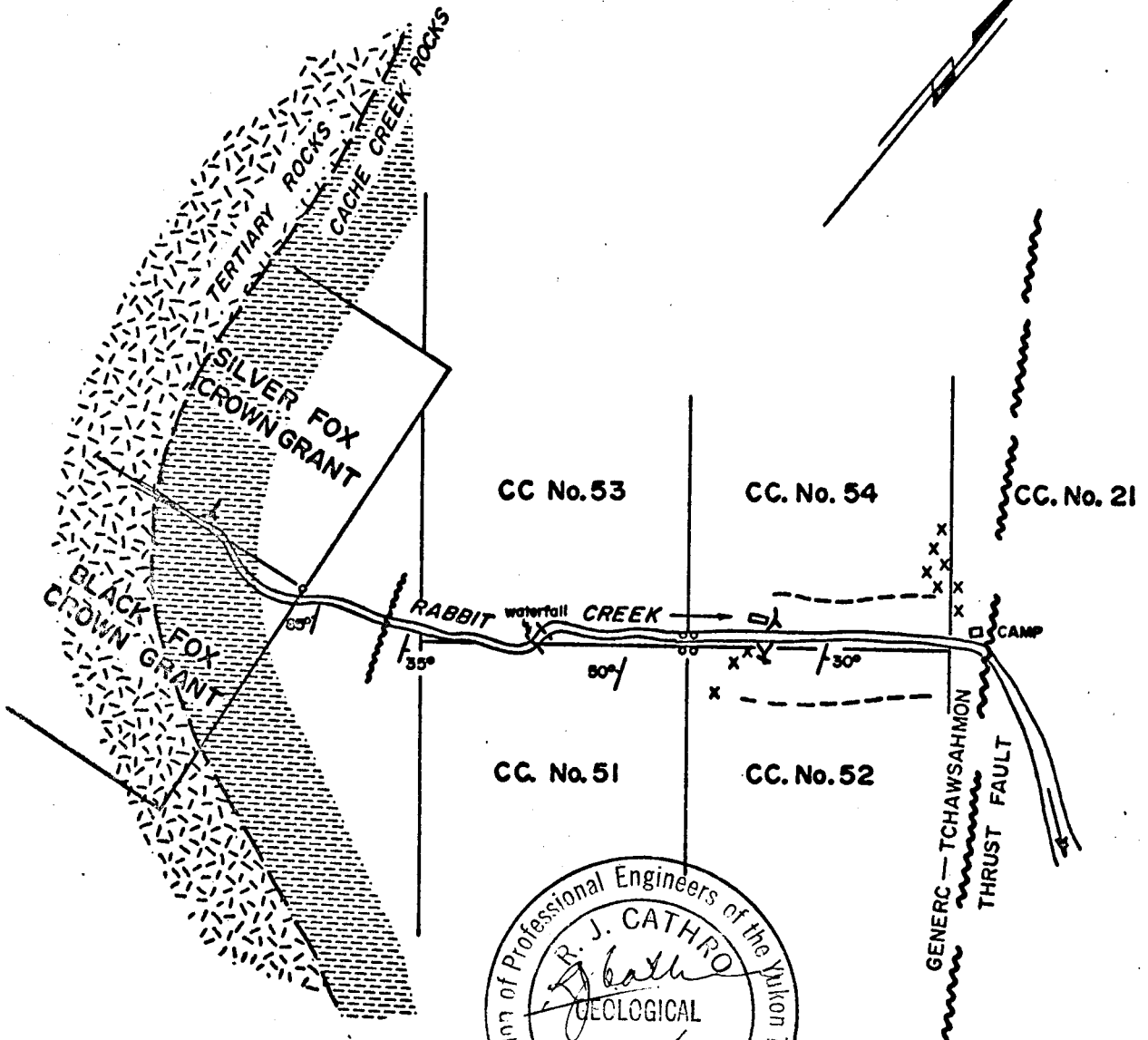
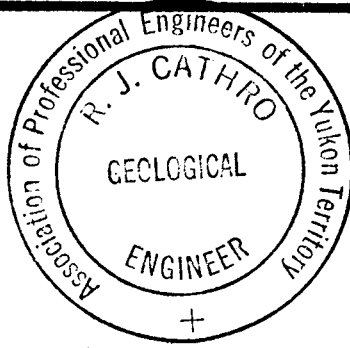
1. I am a consulting geological engineer.
2. I am a graduate of the University of British Columbia, 1959.
3. I am a registered professional engineer in the Yukon and British Columbia.
4. From 1959 to 1966 I was engaged in mining and exploration geology and held positions of responsibility with United Keno Hill Mines Ltd., Giant Yellowknife Mines Ltd., and Eldorado Mining & Refining Ltd.
5. I have personally studied the maps and report referred to in this report and am thoroughly familiar with the property and surrounding district.
6. I have no interest, nor do I expect to receive any interest, direct or indirect, in any properties or companies referred to in this report.


R.J. Cathro, B.A.Sc.





LOCATION PLAN		FIG.-1
CC. CLAIM GROUP		
RABBIT CREEK, WHITE RIVER DISTRICT, YUKON		
ARCHER, CATHRO & ASSOCIATES LTD.		
<i>Consulting Geological Engineers</i>		
DRAWN	H. W. C.	
DATE	NOVEMBER, 1967	
SCALE	As Shown	



- LEGEND**
- — Claim posts
 - y— Adit - open, caved
 - — Trench - drilled & blasted
 - x — Pit
 - - - Soil sampling

SKETCH PLAN		
RABBIT CREEK SHOWING		
WHITE RIVER DISTRICT, YUKON		
ARCHER, CATHRO & ASSOCIATES LTD.		
<i>Consulting Geological Engineers</i>		
DRAWN	H. W. C.	FIG.-2
DATE	NOVEMBER, 1967	
SCALE	1" = 1000'	

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POST OFFICE BOX 1708
WHITEHORSE, Y.T.

AFFIDAVIT

I, Robert J. Cathro, Consulting Engineer of Whitehorse, Yukon Territory, agent for Pacific Giant Steel Ores Ltd., have compiled the Statement of Costs accompanying this report and do hereby make oath and say:

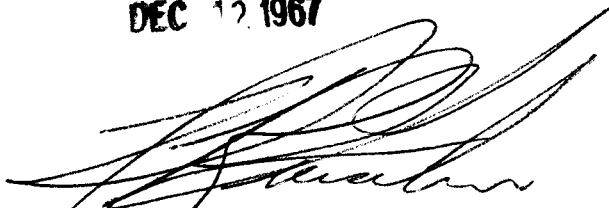
"That to the best of my knowledge and belief this Statement of Costs is a true and accurate representation of expenditures to be applied for assessment credit on the "CC" claims.



R.J. Cathro, P. Eng.

Sworn and subscribed to
at Whitehorse this day
of

DEC 12 1967



A Commissioner for taking Affidavits
in and for the Yukon Territory.

ARCHER, CATHRO

AND ASSOCIATES LTD.

CONSULTING GEOLOGICAL ENGINEERS

CASCA BUILDING, WHITEHORSE, Y.T. 667-4113

BENTALL CENTRE, VANCOUVER, B.C. 688-3022 OR 522-1562

POST OFFICE BOX 1708
WHITEHORSE, Y.T.

Dec. 11/67

Statement of Field Expenditures PACIFIC GIANT STEEL ORES Sept. 15- Dec. 15, 1967.

Professional Fees

R.J. Cathro-

Sept. 20-22- visit to property	1 1/2 days	
Sept. 29- " " "	1/2 "	
Oct 16- " " "	1 "	
Misc. arrangement & preparing qualifying report	3 "	
Total-----	6 days @ 125.00-----	\$750.00 ✓

Expenses

1. Transportation

a. Fixed wing- Sept. 29-G.N.A. #10165-----	135.00 ✓
b. Helicopter- T.N.T.A.	
Sept. 20-21-#367,368-----	382.00 ✓
" 29--- 818-----	290.00 ✓
Oct 16-18- 388-----	319.00 ✓
	1126.00 ✓

2. Assays

Rock- Whitehorse-----	30.00
Geochem- Chemex, Vancouver-----	23.10

53.10 X

3. Office

Drafting- 10 hours @ \$5.00-----	50.00
Blueprinting & photocopying-----	32.00
Photos-----	4.45
Telephone-----	24.75

111.20

Total Expenses-----1290.30

Total----- \$2040.30

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WHITEHORSE, Y.T.

Dec. 11/67

Report on
Trenching & Prospecting
CC claims- Rabbit Creek, Y.T.
July 1-Oct. 31/67

Personnel

Hector Rail- Sept. 13-Oct 16- 34 days @ \$30.00/day.
I.L. Foster- " " " " " " @ \$20.00/day.
R. Dickson- " " " 6- 24 days @ \$20.00/day.

Prospecting

A total of 40 mandays were spent on prospecting in order to locate areas for trenching & prospecting. Costs were:

Wages-----\$900.00
Camp costs @ \$10.00/manday--400.00
\$1300.00

Trenching

All trenching was done in bedrock using a Ponjar gas drill and explosives. One trench was located on CC #36 claim. It was 21' x 5' x 2' deep (7.8 cu. yards). Six other trenches were put in on Rabbit Creek and their location is shown on the attached plan. The dimensions were as follows:

1A- 21x3x2 = 4.7 cu. yds.
1B- 50x3x4 = 22.2 " "
- 40x4x4 = 23.7 " "
2 - 54x4x2 = 16.0 " "
- 30x4x2 = 8.9 " "
- 8x3x3 = 2.7 " "
7 - 6x6x2 = 2.7 " "

2.


The total volume moved, including the trench on CC
#36 claim, is 88.7 cu. yds. Assessment credit=
88.7 x 25= \$2218.00

The total value of work for assessment credit is
thus:

Prospecting-----	\$1300.00
Trenching-----	2218.00
Supervision, aircraft charges, assaying and report.	<u>2040.30</u>

\$5558.30

Respectfully submitted,
ARCHER, CATHRO & ASSOC. LTD.



R.J. Cathro

RJC/pc